

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/561,092  
Source: IFWP  
Date Processed by STIC: 01/03/2006

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 01/03/2006

PATENT APPLICATION: US/10/561,092

TIME: 11:34:57

Input Set : A:\034123-109.ST25.txt

Output Set: N:\CRF4\01032006\J561092.raw

```

3 <110> APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
4     DOWDY, Steven F
5     WADIA, Jehangir S
7 <120> TITLE OF INVENTION: POLYPEPTIDE TRANSDUCTION AND FUSOGENIC PEPTIDES
9 <130> FILE REFERENCE: 034123-109
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/561,092
C--> 12 <141> CURRENT FILING DATE: 2005-12-16
14 <150> PRIOR APPLICATION NUMBER: 60/480,065
15 <151> PRIOR FILING DATE: 2003-06-20
17 <160> NUMBER OF SEQ ID NOS: 21
19 <170> SOFTWARE: PatentIn version 3.3
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 86
23 <212> TYPE: PRT
24 <213> ORGANISM: Unknown
26 <220> FEATURE:
27 <223> OTHER INFORMATION: transducing protein
29 <400> SEQUENCE: 1
31 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
32 1           5           10           15
35 Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
36           20           25           30
39 His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly
40           35           40           45
43 Arg Lys Lys Arg Arg Gln Arg Arg Pro Pro Gln Gly Ser Gln Thr
44           50           55           60
47 His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp
48 65           70           75           80
51 Pro Thr Gly Pro Lys Glu
52           85
55 <210> SEQ ID NO: 2
56 <211> LENGTH: 20
57 <212> TYPE: PRT
58 <213> ORGANISM: Unknown
60 <220> FEATURE:
61 <223> OTHER INFORMATION: HA2 analog.
63 <400> SEQUENCE: 2
65 Gly Leu Phe Gly Ala Ile Ala Gly Phe Ile Glu Gly Gly Trp Thr Gly
66 1           5           10           15
69 Met Ile Asp Gly
70           20
73 <210> SEQ ID NO: 3
74 <211> LENGTH: 20

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Input Set : A:\034123-109.ST25.txt

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75 <212> TYPE: PRT
76 <213> ORGANISM: Unknown
78 <220> FEATURE:
79 <223> OTHER INFORMATION: HA2 analog
81 <400> SEQUENCE: 3
83 Gly Leu Phe Glu Ala Ile Ala Glu Phe Ile Glu Gly Gly Trp Glu Gly
84 1          5          10          15
87 Leu Ile Glu Gly
88          20
91 <210> SEQ ID NO: 4
92 <211> LENGTH: 5
93 <212> TYPE: PRT
94 <213> ORGANISM: Unknown
96 <220> FEATURE:
97 <223> OTHER INFORMATION: linker moiety
99 <400> SEQUENCE: 4
101 Gly Gly Gly Gly Ser
102 1          5
105 <210> SEQ ID NO: 5
106 <211> LENGTH: 6
107 <212> TYPE: PRT
108 <213> ORGANISM: Unknown
110 <220> FEATURE:
111 <223> OTHER INFORMATION: linker moiety
114 <220> FEATURE:
W--> 115 <221> NAME/KEY: Xaa
116 <222> LOCATION: (6)..(6)
117 <223> OTHER INFORMATION: Xaa = any number of repeats of amino acids 1-5
119 <400> SEQUENCE: 5
W--> 121 Gly Gly Gly Gly Ser Xaa
122 1          5
125 <210> SEQ ID NO: 6
126 <211> LENGTH: 12
127 <212> TYPE: PRT
128 <213> ORGANISM: Unknown
130 <220> FEATURE:
131 <223> OTHER INFORMATION: linker moiety
133 <400> SEQUENCE: 6
135 Gly Lys Ser Ser Gly Ser Gly Ser Glu Ser Lys Ser
136 1          5          10
139 <210> SEQ ID NO: 7
140 <211> LENGTH: 14
141 <212> TYPE: PRT
142 <213> ORGANISM: Unknown
144 <220> FEATURE:
145 <223> OTHER INFORMATION: linker moiety
147 <400> SEQUENCE: 7
149 Gly Ser Thr Ser Gly Ser Gly Lys Ser Ser Glu Gly Lys Gly
150 1          5          10

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Input Set : A:\034123-109.ST25.txt

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153 <210> SEQ ID NO: 8
154 <211> LENGTH: 18
155 <212> TYPE: PRT
156 <213> ORGANISM: Unknown
158 <220> FEATURE:
159 <223> OTHER INFORMATION: linker moiety
161 <400> SEQUENCE: 8
163 Gly Ser Thr Ser Gly Ser Gly Lys Ser Ser Glu Gly Ser Gly Ser Thr
164 1          5          10          15
167 Lys Gly
171 <210> SEQ ID NO: 9
172 <211> LENGTH: 18
173 <212> TYPE: PRT
174 <213> ORGANISM: Unknown
176 <220> FEATURE:
177 <223> OTHER INFORMATION: linker moiety
179 <400> SEQUENCE: 9
181 Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr
182 1          5          10          15
185 Lys Gly
189 <210> SEQ ID NO: 10
190 <211> LENGTH: 14
191 <212> TYPE: PRT
192 <213> ORGANISM: Unknown
194 <220> FEATURE:
195 <223> OTHER INFORMATION: linker moiety
197 <400> SEQUENCE: 10
199 Glu Gly Lys Ser Ser Gly Ser Gly Ser Glu Ser Lys Glu Phe
200 1          5          10
203 <210> SEQ ID NO: 11
204 <211> LENGTH: 30
205 <212> TYPE: PRT
206 <213> ORGANISM: Unknown
208 <220> FEATURE:
209 <223> OTHER INFORMATION: HA2 TAT peptide
211 <400> SEQUENCE: 11
213 Gly Leu Phe Gly Ala Ile Ala Gly Phe Ile Glu Asn Gly Trp Glu Gly
214 1          5          10          15
217 Met Ile Asp Gly Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg
218          20          25          30
221 <210> SEQ ID NO: 12
222 <211> LENGTH: 20
223 <212> TYPE: PRT
224 <213> ORGANISM: Unknown
226 <220> FEATURE:
227 <223> OTHER INFORMATION: HA2 peptide
229 <400> SEQUENCE: 12
231 Gly Leu Phe Gly Ala Ile Ala Gly Phe Ile Glu Asn Gly Trp Glu Gly
232 1          5          10          15

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Input Set : A:\034123-109.ST25.txt.

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235 Met Ile Asp Gly
236      20
239 <210> SEQ ID NO: 13
240 <211> LENGTH: 418
241 <212> TYPE: DNA
242 <213> ORGANISM: Unknown
244 <220> FEATURE:
245 <223> OTHER INFORMATION: cDNA
247 <400> SEQUENCE: 13
248 gcgtagagga tcgagatctc gatcccgcca aattaatacg actcactata ggggaattgt      60
250 gaggcgataa caattcccct ctagaaataa ttttgtttaa ctttaagaag gagatataacc      120
252 atgggcagca gccatcatca tcatcatcac agcagcggcc tggcgccgcg cggcagccat      180
254 atgaggaaga agcggagaca gcgacgaaga ggctcggatc cgaattcgag ctccgtcgac      240
256 aagcttgccg ccgcactcga gcaccaccac caccaccact gagatccggc tgctaacaaa      300
258 gcccgaaagg aagctgagtt ggctgctgcc accgctgagc aataactagc ataaccctt      360
260 ggggcctcta aacgggtctt gaggggtttt ttgctgaaag gaggaactat atccggat      418
263 <210> SEQ ID NO: 14
264 <211> LENGTH: 418
265 <212> TYPE: DNA
266 <213> ORGANISM: Unknown
268 <220> FEATURE:
269 <223> OTHER INFORMATION: cDNA
271 <400> SEQUENCE: 14
272 cgcattctct agctctagag ctaggcgctt ttaattatgc tgagtgatat ccccttaaca      60
274 ctgcgcctatt gttaagggga gatctttatt aaaacaaatt gaaattcttc ctctatatgg      120
276 taccgcgtcg cggtagtagt agtagtagtg tcgtcgccgc accacggcgc gccgtcggta      180
278 tactccttct tcgcctctgt cgctgcttct ccgagcctag gcttaagctc gaggcagctg      240
280 ttcgaaagcc ggcgtagact cgtgggtggt gtgggtggtg ctctaggccg acgattgttt      300
282 cgggctttcc ttcgactcaa ccgacgacgg tggcgactcg ttattgatcg tattggggaa      360
284 ccccgagatc ttgcccagaa ctccccaaaa aacgactttc ctcttgata taggccta      418
287 <210> SEQ ID NO: 15
288 <211> LENGTH: 53
289 <212> TYPE: PRT
290 <213> ORGANISM: Unknown
292 <220> FEATURE:
293 <223> OTHER INFORMATION: TAT peptide
295 <400> SEQUENCE: 15
297 Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro
298 1      5      10      15
301 Arg Gly Ser His Met Arg Lys Lys Arg Arg Gln Arg Arg Arg Gly Ser
302      20      25      30
305 Asp Pro Asn Ser Ser Ser Val Asp Lys Leu Ala Ala Ala Leu Glu His
306      35      40      45
309 His His His His His
310      50
313 <210> SEQ ID NO: 16
314 <211> LENGTH: 360
315 <212> TYPE: DNA
316 <213> ORGANISM: Unknown

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## RAW SEQUENCE LISTING

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Input Set : A:\034123-109.ST25.txt

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318 &lt;220&gt; FEATURE:

319 &lt;223&gt; OTHER INFORMATION: cDNA

321 &lt;400&gt; SEQUENCE: 16

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322 gcgtagagga tcgagatctc gatcccgcgga aattaatacg actcactata ggggaattgt      60
324 gagcggataa caattcccct ctagaaataa ttttgtttaa cttaagaag gagatatacc      120
326 atgggcagga agaagcggag acagcgacga agaggccata tggctagcat gactggtgga      180
328 cagcaaattg gtcgggatcc gaattcgagc tccgtcgaca agcttgccgc cgcactcgag      240
330 caccaccacc accaccactg agatccggct gctaacaaag ccgaaagga agctgagttg      300
332 gctgctgcca ccgctgagca ataactagca taacccttg gggcctctaa acgggtcttg      360

```

335 &lt;210&gt; SEQ ID NO: 17

336 &lt;211&gt; LENGTH: 360

337 &lt;212&gt; TYPE: DNA

338 &lt;213&gt; ORGANISM: Unknown

340 &lt;220&gt; FEATURE:

341 &lt;223&gt; OTHER INFORMATION: cDNA

343 &lt;400&gt; SEQUENCE: 17

```

344 cgcattctcct agctctagag ctaggcgct ttaattatgc tgagtgatat ccccttaaca      60
346 ctgccttatt gttaagggga gatctttatt aaaacaaatt gaaattcttc ctctatatgg      120
348 taccgcctct tcttcgctc tgctcgctgct tctccggtat accgatcgta ctgaccacct      180
350 gtcgtttacc cagccctagg cttaagctcg aggcagctgt tcgaacgccg gcgtgagctc      240
352 gtggtggtgg tgggtggtgac tctaggccga cgattgttcc gggctttcct tcgactcaac      300
354 cgacgacggg ggcgactcgt tattgatcgt attggggaac ccgggagatt tgcccagaac      360

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357 &lt;210&gt; SEQ ID NO: 18

358 &lt;211&gt; LENGTH: 46

359 &lt;212&gt; TYPE: PRT

360 &lt;213&gt; ORGANISM: Unknown

362 &lt;220&gt; FEATURE:

363 &lt;223&gt; OTHER INFORMATION: TAT peptide

365 &lt;400&gt; SEQUENCE: 18

```

367 Met Gly Arg Lys Lys Arg Arg Gln Arg Arg Gly His Met Ala Ser
368 1          5          10          15
371 Met Thr Gly Gly Gln Gln Met Gly Arg Asp Pro Asn Ser Ser Val
372          20          25          30
375 Asp Lys Leu Ala Ala Ala Leu Glu His His His His His His
376          35          40          45

```

379 &lt;210&gt; SEQ ID NO: 19

380 &lt;211&gt; LENGTH: 1437

381 &lt;212&gt; TYPE: DNA

382 &lt;213&gt; ORGANISM: Unknown

384 &lt;220&gt; FEATURE:

385 &lt;223&gt; OTHER INFORMATION: cDNA

387 &lt;400&gt; SEQUENCE: 19

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388 gcgcgggtga tgccggccac gatgcgtccg gcgtagagga tcgagatctc gatcccgcgga      60
390 aattaatacg actcactata ggggaattgt gagcggataa caattcccct ctagaaataa      120
392 ttttgtttaa cttaagaag gagatatacc atgggcagga agaagcggag acagcgacga      180
394 agaggccata tggctagcat gactggtgga cagcaaattg gtcgggatcc gaattccatg      240
396 tccaatttac tgaccgtaca ccaaaatttg cctgcattac cggtcgatgc aacgagtgat      300
398 gaggttcgca agaacctgat ggacatgttc agggatcgcc aggcgttttc tgagcatacc      360
400 tggaaaatgc ttctgtccgt ttgccggctc tgggcggcat ggtgcaagtt gaataaccgg      420

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/561,092

DATE: 01/03/2006  
TIME: 11:34:58

Input Set : A:\034123-109.ST25.txt  
Output Set: N:\CRF4\01032006\J561092.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; Xaa Pos. 6

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/561,092

DATE: 01/03/2006

TIME: 11:34:58

Input Set : A:\034123-109.ST25.txt

Output Set: N:\CRF4\01032006\J561092.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:115 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:5  
L:121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0